

3. On Mammals collected by Mr. J. D. La Touche at Kuatun, N.W. Fokien, China. By OLDFIELD THOMAS.

[Received October 10, 1898.]

In the spring of this year Mr. J. D. La Touche, who had for some years interested himself in the birds and mammals of the vicinity, made a special collecting-trip to Kuatun, in the mountains of North-western Fokien, and obtained there a considerable number of small mammals. This collection he has been good enough to allow me to work out, and he has also permitted the British Museum to acquire a full selection of the specimens, besides presenting several valuable examples in spirit.

For some years, in conjunction with Mr. C. B. Rickett, also a generous donor to our National Museum, Mr. La Touche has had collectors at work at Kuatun, and many of the specimens so obtained have been presented to the Museum as they have come in. The first specimens received by us of *Typhlomys cinereus* and the type of *Mus latouchei* have been presented in this way.

The following observations on the situation and character of Kuatun are contributed by Mr. La Touche, who is also the author of the various notes in inverted commas appended to the different species.

The species, including two sent previously and not in the present collection, number 26, of which one species and one subspecies appear to need new names.

Mr. La Touche describes as follows the position and characteristics of Kuatun, the Chinese village where the collection was made:—

“Kuatun is a small hamlet, lost, as Père David says, among the mountains of N.W. Fokien, called in English maps the Bohea Mts. It is but a few miles from the Kiangsi border. The village had at the time of our stay a population of 54 people, 37 adults and 17 children. Nearly all are, I believe, descendants of emigrants from Kiangsi. The village is built on the slope of a steep mountain and is about 3500 ft. above sea-level, the mountain rising above it to a height of about 6500 ft. above sea-level. This mountain is as high as any in the district. The country is very thickly wooded in many parts, and the mountains have in many cases extensive tracts of grass-land near their summits. The top of Kuatun Mountain, which I would venture to call “Mount David,” after the discoverer of the locality as a collecting-ground, is covered with forest, consisting of dwarfed, moss-grown, deciduous trees, with an undergrowth of dwarf bamboos. The productions of the country, where cultivated, are tea¹ and bamboo. A little maize, a few sweet-potatoes, rough turnips and cabbages are also grown for local consumption. Everything else in the way of food has to be brought from a distance. The climate of these mountains is on the whole cold and damp.

¹ The highest tea-plantation of the district is on Mount David, alt. 5,500 ft.

In the winter snow and ice cover the mountains; the spring is rainy and very cold. Moderate heat prevails in summer, and the autumn is cool and fairly dry as in other parts of China. We were told that it rains in Kuatun for eight months in the year. This country is about as wild as any in S.E. China. Close to Kuatun whole mountain-slopes are still virgin forest, the steepness of the hills and difficulty of transporting the timber being the reasons for which deforestation is not carried on in the usual Chinese fashion. The native hunters that we employed while at Kuatun are excellent field-naturalists and hardy, energetic hunters, and in all their statements regarding the natural history of the district were perfectly truthful and straightforward. But they, as well as the villagers generally, are rough and unsympathetic, and their love of money is unbounded. Although Kuatun is an excellent collecting-ground, the country is by no means easy to work. The hills are very steep, the forests very thick and difficult walking, and cold, damp, want of nourishing food, and all the minor discomforts consequent on living in close proximity with Chinese will be experienced by any one venturing to explore these wild parts of S.E. China."

1. *MACACUS RHEUS* L.

"One of a party of three killed by a hunter. The natives told us that this species was the commoner of the two known at Kuatun. Monkeys are seldom seen in summer, but in autumn and winter they are often seen in the woods going about in bands."

2. *RHINOLOPHUS LUCTUS* Temm.

One specimen. 18/4/98.

This is the first record of the occurrence of *R. luctus* in China, but it is quite natural that so characteristic a Himalayan form should be found there.

3. *RHINOLOPHUS PEARSONI* Horsf.

One specimen. 16/4/98.

4. *VESPERTILIO MURINUS*¹ SUPERANS, subsp. n.

Six specimens.

Apparently exactly like the European *V. murinus* in colour and all other respects, but constantly larger, the forearm ranging from 4 to 9 mm. longer than in European examples.

Forearm of the type 50 mm.

Hab. Se-sa-lin, Ichang, Yang-tse-kiang.

Type. B. M. No. 97.4.21.1. Collected Oct. 1, 1896, and presented by Mr. F. W. Styan.

The first Chinese example of *V. murinus* received by the Museum was that presented by Mr. Styan, and now selected as the type. In spite of its markedly greater size it did not seem advisable to

¹ *Vesperugo discolor* auctorum.

give it a special name on a single specimen, but now that Mr. La Touche's collection contains six more examples of this large race, it is shown to be so constant as to deserve a subspecific name.

5. *PIPISTRELLUS SAVII PULVERATUS* Pet.

One specimen, presented in 1897.

6. *PIPISTRELLUS ABRAMUS* Temm.

One specimen, presented in 1897.

7. *SCOTOPHILUS ORNATUS* Bly.

One specimen, presented in 1897.

This also, like *Rhinolophus luctus*, is the first Chinese record of a Himalayan species.

8. *MURINA LEUCOGASTRA* M.-Edw.

One specimen. 5/98.

I quite fail to follow Dobson's reasons¹ for upsetting his previous perfectly correct adoption of *Murina* instead of *Harpiocephalus* for the name of the present genus. Both by "page priority" and the opinion of the "first reviser" (Dobson in his earlier work) *Murina* should be adopted for the genus, whether *Harpiocephalus* is subgenerically synonymous with it or not.

9. *CROCIDURA* sp. inc.

Six young specimens, not determinable.

A shrew of the *C. russula* group, from Ching Feng Ling, is also included in the collection.

"Caught in the stony bed of a dried-up torrent."

10. *TALPA WOGURA* Temm.

Four skins, and two specimens in spirit.

"Tolerably common."

11. *FELIS DOMINICANORUM* La Touche².

The type specimen of this species was until recently living in the Society's Menagerie. It was obtained at Kuatun, so that a passing reference may be made to it here.

12. *MUSTELA FLAVIGULA* Bodd.

One specimen.

"Shot in the forest."

13. *SCIURUS MACCLELLANDII SWINHOEI* M.-Edw.

Two specimens. Several others previously sent.

"An abundant species. Nests of this or the next one were often met with. These squirrels were breeding during our stay, and many young ones, too small to rear, were brought to us."

¹ Mon. Asiatic Chiroptera, p. 150 (footnote) (1876).

² P. Z. S. 1898, p. 1, pl. i. The animal died in March last, and the specimen is now in the British Museum.—Ed.

14. FUNAMBULUS PERNYI M.-Edw.

Five specimens.

Several examples of this well-marked species have also been presented to the Museum by Messrs. La Touche & Rickett in previous consignments.

"Common in the forests at 3000-4000 feet altitude."

15. TYPHLOMYS CINEREUS M.-Edw.

Six skins and a male in spirit.

Mr. La Touche had already presented the British Museum with three skins of this most interesting little animal, and it was by the help of these that, when working out the classification of the Rodents, I was enabled to show its relationship to the South Indian *Platacanthomys*.

In the same paper¹ was recorded the important fact that the latter genus, like the true *Glirinae*, possesses no cæcum, and it has therefore been with much interest that I have examined the intestines of Mr. La Touche's spirit-specimen of *Typhlomys*. Here I find that, unlike its ally, a cæcum is present, although it is only about an inch in length. *Typhlomys* is, therefore, even more distinctly intermediate between the *Gliridæ* and the *Muridæ* than had been supposed.

"I procured 8 specimens of this rare mouse. I believe they were all caught in the mountains some hundred feet above the village, say at 4000 feet."

16. MUS LATOCHEI Thos.

Two specimens.

This fine rat was described in 1897² on one of Mr. La Touche's Kuatun specimens. Like so many other animals in this region it seems to have been first obtained by Père David, as I find I have notes on a specimen in the Paris Museum received there in 1874.

"*Mus latouchei* is a forest rat, and is uncommon, at least in the spring. Once, when walking in the forest, a native hunter showed me a run and burrow of this rat. It was in the bank by the side of the path. We procured only one specimen during our stay, but another had been collected for me during the winter."

17. MUS HUMILIATUS M.-Edw.

One from Kuatun 27/4/98, another from Tung Chin, and a third from Swatow.

This animal is closely allied to *M. decumanus*, and is not impossibly the original wild stock of that ubiquitous pest.

"House-rat at Kuatun, I believe."

18. MUS RATTUS FLAVIPECTUS M.-Edw.

Three specimens.

Milne-Edwards's *Mus flavipectus* is clearly a member of the *Mus*

¹ P. Z. S. 1896, p. 1016, footnote.

² Ann. & Mag. N. H. (6) xx. p. 113.

rattus group, and is closely allied to the Himalayan *M. r. nitidus* Hodgs. For the present it may be conveniently referred to as a subspecies of *M. rattus*, just as has been done with the Indian and Malayan members of the group.

“House-rat at Kuatun.”

19. *MUS EDWARDSI* Thos.

Two specimens.

Originally described ¹ on one of Père David's specimens.

“This is, I believe, a forest-rat. It is not commonly trapped, at least in the spring. Only two specimens were taken during our stay.”

20. *MUS CONFUCIANUS* M.-Edw.

Fifty specimens.

This must be one of the most common of the rats of this part of China, as every collection contains a number of examples of it. It appears to be a smaller relative of the Formosan *Mus coxingi*, and is also closely allied to the Himalayan *M. jerdoni* Blyth. It is indeed not impossible that it may be found to intergrade into the latter.

Of all Muridæ the rats of this group seem to be the most variable both in colour and size, so that it is very difficult to come to a satisfactory conclusion about their interrelationships. The present series shows the usual wonderful variability, many shades of red, yellow, and grey, and all degrees of spininess being found among them. Speaking generally they tend to fall into two groups, the one greyish, with white-tipped tail and comparatively narrow skull, the other reddish with the tail only white below, and the skull comparatively broad; but the two groups are not yet fully differentiated, as intermediate individuals in regard to each of the differential characters are to be found among the series. In actual size, like *M. coxingi*, they do not seem to vary quite so much as the Bornean examples of the group, to which reference was made in a paper on the Muridæ of that island ².

“Very abundant everywhere; they differ much among themselves.”

21. *MUS CHEVRIERI* M.-Edw.

Seventeen specimens.

This is the Chinese representative of the common Long-tailed Field-mouse, *Mus sylvaticus*.

Judging by the present series, it is rather more constant in colour than its European relative *M. sylvaticus*, and its change from the grey phase to the rufous is carried out more abruptly than in Europe, so that the intermediate specimens so commonly caught here do not occur there, while on the other hand

¹ P. Z. S. 1882, p. 587.

² Ann. & Mag. N. H. (6) xiv. p. 452 (1894).

specimens may be obtained partly rufous and partly grey, a stage that I have never seen in European series.

"The common field-mouse of the Kuatun district."

22. *MUS HARTI*, sp. n.

Adult and young.

Allied to *Mus agrarius*, of which it is the Chinese representative.

Size and general appearance very much as in *M. chevrieri*. Colour above dull grizzled rufous, not or but little brightening posteriorly; under surface dull white, the slaty bases of the hairs showing through; line of demarcation on sides fairly sharply defined. Ears very short, well-haired, blackish, a few minute silvery hairs intermixed with the black. Dorsal line very indistinct, scarcely perceptible, very different to the strong and sharply-defined line of *M. agrarius*. Upper surface of hands and feet white. Tail about as long as the head and body, thin, almost naked, its scales dark throughout, its minute hairs dark above and inconspicuously white below.

Skull and dentition not appreciably different from those of *M. agrarius*.

Dimensions of the type, in skin :—

Head and body (apparently stretched), 99 mm.; tail, 92; hind-foot (wet), 21.5.

Skull: greatest length, 26; basilar length, 21; greatest breadth, 13.8; length of nasals, 9.6; interorbital breadth, 4.5; palate, length from henselion, 12; diastema, 7.4; palatal foramina, 5×2 ; length of upper molar series, 3.9.

Type. B. M., No. 98.11.1.18, collected May 4th, 1898, by J. D. La Touche.

Besides these two specimens from Kuatun the Museum contains a skin in spirit from Kiu-kiang on the Yang-tse, collected by Mr. F. W. Styan in 1888, and one from Baksa, Formosa, obtained by Mr. P. A. Holst in 1893.

On the other hand a specimen from Manchuria, although separable subspecifically¹, shows, as might be expected, a much closer resemblance to the strongly rufous and black-lined *Mus agrarius* than to the South Chinese *M. harti*.

At Mr. La Touche's suggestion, I have named this species in honour of Sir Robert Hart, the well-known Inspector-General of

¹ *MUS AGRARIUS MANTCHURICUS*, subsp. n.

Similar to *M. a. typicus* in all essential respects, but slightly larger, and of a much brighter, richer, and more uniform rufous above and on the sides, the grey tone present in *typicus* being quite lost in the rich rufous of the Eastern form.

Dimensions of the type, in skin :—

Head and body (apparently stretched), 116 mm.; tail, 78; hind foot (wet), 19; ear (wet), 14.

Skull: greatest length, 27; length of upper molar series, 4.1.

Hab. Manchuria.

Type. B. M., No. 83.2.24.1. Collected by Dr. Janskowski, and presented by the Branicki Museum, Warsaw.

Chinese Customs, to whose kindness he has been indebted for many facilities in carrying on his scientific work.

23. *MUS PYGMÆUS* M.-Edw.

Three skins and five specimens in spirit.

This is the Eastern representative of the European Harvest-mouse. Mr. La Touche's specimens, as also an example from Shanghai sent home by Consul Swinhoe, have tails somewhat longer than Prof. Milne-Edwards gives in his description of *Mus pygmæus*. The same author gives the hind feet as 18 mm. in length. In my notes on the type specimen in the Paris Museum, however, I find that the tail is said to be "doubtfully perfect," and the hind feet are recorded as 13.9 mm., so no doubt 18 is a misprint for 14, a length which quite agrees with what is found in the Kuatun specimens.

24. *MICROTUS MELANOGASTER* M.-Edw.

Ten specimens.

"This appears to be common enough, though I saw only one live specimen, which my little dog routed out of its run in the brushwood near the path leading up to the village."

25. *RHIZOMYS SINENSIS* Gray.

This fine Bamboo-rat seems to be common, as a good number of specimens have been sent home at various times by Messrs. La Touche & Rickett.

"Found in the bamboo plantations, about 3000 feet. Young ones were brought to us in April, and we bought three very young ones alive, but they died after a few days' captivity."

26. *LEPUS SINENSIS* Gray.

Two specimens, presented in 1896.

4. A Revision of the Genera and Species of Fishes of the Family *Mormyridæ*. By G. A. BOULENGER, F.R.S.

[Received November 3, 1898.]

(Plate LI.)

The numerous additions to the freshwater Fish-Fauna of Africa, which it has lately been my good fortune to describe, have necessitated much revision of the work of my predecessors in this department. With no group was this more necessary than with the *Mormyridæ*.

Although a considerable number of genera have been proposed and defined in more or less satisfactory manner by Johannes Müller, Marcusen, Gill, and Bleeker, the tendency has of late been to revert to the view of Valenciennes and to unite all the species under the head *Mormyrus*, with the exception of *Gymnarchus*,